```
 NEWS EXPRESS  29 JUNE 2007:  CURRENT WINDOWS VERSION IS V8.2,
               CURRENT MACINTOSH VERSION IS V6.0c(ENG) AND V6.0Jc(JP),
               AND CURRENT DISCOVER FILE IS DATED 05 JULY 2007.

 NEWS HOURS    STN Operating Hours Plus Help Desk Availability
 NEWS LOGIN    Welcome Banner and News Items
 NEWS IPC8     For general information regarding STN implementation of IPC 8

Enter NEWS followed by the item number or name to see news on that
specific topic.

  All use of STN is subject to the provisions of the STN Customer
  agreement.  Please note that this agreement limits use to scientific
  research.  Use for software development or design or implementation
  of commercial gateways or other similar uses is prohibited and may
  result in loss of user privileges and other penalties.

* * * * * * * * * * * * * * * STN  Columbus  * * * * * * * * * * * * * * *

FILE 'HOME' ENTERED AT 09:09:23 ON 07 AUG 2007

=> file .mymstn
'JICST-EPLUS' IS NOT A VALID FILE NAME
Enter "HELP FILE NAMES" at an arrow prompt (=>) for a list of files
that are available.  If you have requested multiple files, you can
specify a corrected file name or you can enter "IGNORE" to continue
accessing the remaining file names entered.
ENTER A FILE NAME OR (IGNORE):ignore
COST IN U.S. DOLLARS                                SINCE FILE      TOTAL
                                                       ENTRY    SESSION
FULL ESTIMATED COST                                     0.21       0.21

FILE 'MEDLINE' ENTERED AT 09:09:44 ON 07 AUG 2007

FILE 'AGRICOLA' ENTERED AT 09:09:44 ON 07 AUG 2007

FILE 'BIOSIS' ENTERED AT 09:09:44 ON 07 AUG 2007
Copyright (c) 2007 The Thomson Corporation

FILE 'CAPLUS' ENTERED AT 09:09:44 ON 07 AUG 2007
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.
PLEASE SEE "HELP USAGETERMS" FOR DETAILS.
COPYRIGHT (C) 2007 AMERICAN CHEMICAL SOCIETY (ACS)

FILE 'LIFESCI' ENTERED AT 09:09:44 ON 07 AUG 2007
COPYRIGHT (C) 2007 Cambridge Scientific Abstracts (CSA)


FILE 'BIOTECHNO' ENTERED AT 09:09:44 ON 07 AUG 2007
COPYRIGHT (C) 2007 Elsevier Science B.V., Amsterdam. All rights reserved.

FILE 'EMBASE' ENTERED AT 09:09:44 ON 07 AUG 2007
Copyright (c) 2007 Elsevier B.V. All rights reserved.

=> s algae and hydrogenase and mutant
L1          42 ALGAE AND HYDROGENASE AND MUTANT

=> s l1 and mitochondrial
L2           1 L1 AND MITOCHONDRIAL

=> s l1 and volvocales
L3           0 L1 AND VOLVOCALES
```

```
=> s l1 and protozoa
L4            1 L1 AND PROTOZOA

=> s algae and volvocales
L5          728 ALGAE AND VOLVOCALES

=> s l5 and hydrogenase
L6            2 L5 AND HYDROGENASE

=> d ibib l6 abs 1-2

L6   ANSWER 1 OF 2  CAPLUS  COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER:         2005:29266  CAPLUS
DOCUMENT NUMBER:          142:117574
TITLE:                    Photosynthetic hydrogen production
INVENTOR(S):              Hankamer, Ben; Kruse, Olaf
PATENT ASSIGNEE(S):       University of Queensland, Australia
SOURCE:                   PCT Int. Appl., 76 pp.
                          CODEN: PIXXD2
DOCUMENT TYPE:            Patent
LANGUAGE:                 English
FAMILY ACC. NUM. COUNT:   1
PATENT INFORMATION:

     PATENT NO.           KIND   DATE        APPLICATION NO.          DATE
     ---------------      ----   --------    --------------------     --------
     WO 2005003024         A1    20050113    WO 2004-AU913            20040707
         W:  AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH,
             CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD,
             GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC,
             LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI,
             NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY,
             TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW
         RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM,
             AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK,
             EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE,
             SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE,
             SN, TD, TG
     AU 2004253603         A1    20050113    AU 2004-253603           20040707
     EP 1641712            A1    20060405    EP 2004-737534           20040707
         R:  AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,
             IE, SI, FI, RO, CY, TR, BG, CZ, EE, HU, PL, SK
     US 2006166343         A1    20060727    US 2006-562512           20060316
PRIORITY APPLN. INFO.:                       AU 2003-903453       A   20030707
                                             WO 2004-AU913        W   20040707
AB   A process for the production of hydrogen, comprises the steps of: (i)
     providing a photosynthetic microorganism having electron transfer
     capability through a photosynthetic light reaction pathway and through a
     respiratory electron transfer chain involving an oxidative phosphorylation
     pathway, and which expresses a hydrogenase, wherein regulation
     of the oxidative phosphorylation pathway is disrupted with the result that
     electron flow along the respiratory electron transfer chain toward
     cytochrome oxidase (complex IV) is reduced; (ii)culturing the
     microorganism under microoxic and illuminated conditions; and (iii)
     collecting evolved hydrogen.
REFERENCE COUNT:          4     THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS
                                RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L6   ANSWER 2 OF 2  CAPLUS  COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER:         1989:230149  CAPLUS
DOCUMENT NUMBER:          110:230149
TITLE:                    Hydrogen production by eukaryotic algae
AUTHOR(S):                Brand, Jerry J.; Wright, John N.; Lien, Stephen
CORPORATE SOURCE:         Dep. Bot., Univ. Texas, Austin, TX, 78712, USA
```

SOURCE: Biotechnology and Bioengineering (1989), 33(11), 1482-8
CODEN: BIBIAU; ISSN: 0006-3592
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Eukaryotic algae were extensively screened in order to identify taxa that might be suitable for the photoprodn. of H2. The highest H2 photoprodn. rates were seen in strains of Chlorellales and Volvocales, so they were examined in most detail. Chlamydomonas moewusii photoproduced H2 at the highest initial velocity and generated the largest total amount of H2 before hydrogenase was inactivated by O2. Strains of C. moewusii and C. elliptica generally had the highest activity, with several producing >20 μmol H2/mg chlorophyll-h. Taxonomic patterns were not absolute, however. Some species of algae within H2-producing genera, and even strains within H2-producing species, did not produce H2.

=> s l6 and mutant
L7 0 L6 AND MUTANT

=>